Types of Risk

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Identify various types of risks that businesses may face
- ✓ Differentiate between micro and macro risks
- ✓ Outline the benefits of technology risk management.

Types of Risk

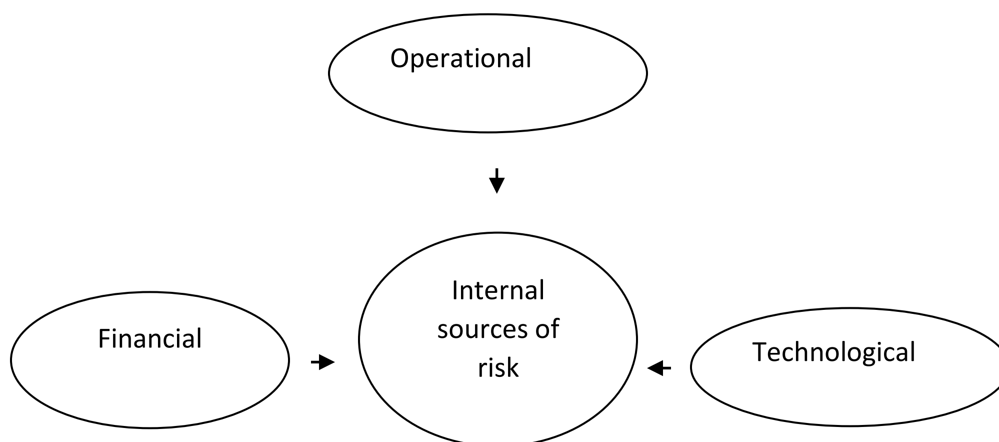
The world today is filled with social and political instability that affects how corporations carry out their business activities. Globalisation has become another important feature for businesses to take into consideration. A company’s environment is no longer limited to the country that it is based in. Western economies interact with Far Eastern and ex-Communist Blocs, as well as the emerging markets in a complicated network. Today's businesses face competition as much as from across the globe as from the next city. Executive managers need to be more efficient than ever before. Standing still is simply not an option, as the pace of technological change is likely to continue in the foreseeable future. Only the organisations that adapt well will prosper and it is obvious that change management has become both, a business necessity and an art. The rate at which a business can improve its services or product range, and the way it produces and delivers them are the true measures of a company’s success.

Risk can be measured on a scale, with probability of occurrence at one end and the probability of non-occurrence at the other end. Risk is the highest where the probability of occurrence is equal to that of non-occurrence.

Risk and Types of Risks

Risk is the likelihood of occurrence of an unexpected or negative outcome. Any action or activity that leads to any kind of loss can be called a risk. A business may be affected by either internal or external influences. Both types of influences will affect the performance of the business. The internal or micro sources of risks are different from external or macro sources. Micro risk factors are generally caused internally within the company; therefore, these risks are within the control of the business. However, macro factors are generally beyond the control of individual businesses. Micro factors include financial, operational and technological risks.

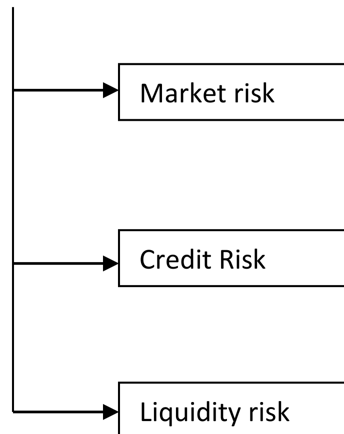
Internal Sources of Risk



Financial Risks

Financial risks are among the high-priority types of risk for every business. Financial risk is caused by market movements due to a number of factors. Financial risk can be classified into three categories; market risk, credit risk and liquidity risk.

Financial Risk



Market Risk

Market risk is the exposure to probable loss due to variations in market prices or rates. All businesses are exposed to some kind of market risk. The form and level of market risk exposure varies from one industry to another and even from one company to another within the same industry. The applicable rates or prices, generally called the market risk factors, could include commodity or equity prices, foreign exchange rates and interest rates.

International corporations may be exposed to foreign exchange market movement if their offshore revenues and expenses are held in different currencies. Even if these were held in the same currencies, there would still be foreign exchange risk when converting offshore earnings into the corporation's home currency. An energy company is exposed to energy price changes, for example, if a change in the input price (the price of crude oil) is not matched by a change in the output price (the price of petroleum or jet fuel).The value of an energy company’s reserves is also directly linked to market prices.

Specific types of market risks will affect different industries. However, there are some market risks that all companies face. For example, how a company's investment portfolio performs has a direct impact on its own financial performance. Businesses remain solvent only if they ensure that all their cash obligations are met through a combination of funding sources, investment liquidity and contingent liabilities.

Market Risk Categories

The main types of market risks are:

Interest Rate Risk

The risk of financial loss caused by the rise and fall of interest rates is known as interest rate risk.

Foreign Exchange Risk

Adverse variation in return or cost caused by changes in the rate of foreign exchange is known as foreign exchange risk.

Commodity Risk

Commodity risk is caused by commodity price fluctuations.

Equity Risk

Equity risk is caused by equity value fluctuations.

Basis Risk

Basis risk is caused by variations in the relative rates of two indices, such as prime rate vs. the London Interbank Offering Rate (LIBOR).

Other types of market risks include prepayment of mortgage loans and securities to other market prices e.g., real estate prices.

Credit Risk

Credit risk occurs when positive cash flows are anticipated in the future. If we expect someone to make a payment, the possibility exists that they might not pay the money owed. This would cause a loss as we would have to replace the missing money. Thus, credit risk is the possibility of loss due to the failure of another person to fulfil their contractual responsibilities, perhaps because they have skipped a payment.

Credit risk may be defined as financial loss caused by default by the counterparty or borrower. Default may not always signify legal bankruptcy of an individual or company. It may simply mean a failure to meet contractual obligations on time due to reluctance or inability. The extent of the loss can be measured by the free-market cost of replacing the lost cash flow.

Credit Rate Risk Categories

Credit risk can be divided into the following comprehensive categories:

- Bonds:
  - Government Bonds
  - Structured Bonds including RMBS, CMBS, ABS and CDOs
  - Corporate Bonds
  - Sovereign Bonds
- Retail Lending:
  - Retail Mortgages
  - Credit Cards and Overdrafts
  - Other Secured Retail Lending
  - Other Unsecured Retail Lending
- Corporate Lending:
  - Commercial Mortgages
  - Small and Medium Enterprise (SME) Unsecured Lending
  - Other Secured Commercial Lending, such as asset finance, trade finance
  - Wholesale (non-SME) Unsecured Lending including syndicated loans
- Deposit Counterparties
- Tenant Default Money Market Counterparties, including Asset-Backed Commercial Paper
- Over-the-Counter (OTC) Counterparty Default
- Securities Lending Counterparty Default Risk
- Derivative Exchanges and other Clearing House Counterparty Default Risk
- Dealing and Settlement Counterparty Default Risk (this will usually be mitigated through simultaneous delivery and payment or DVP settlement)
- Custodian Counterparty Default Risk, which should be mitigated by ring-fencing of assets from those of the custodian
- (Re) insurer Default – Insurable Risks – relating to defaults of an insurer and resulting loss of cover which is different to any loss on investment products issued by that insurer
- Insurance and other Asset Management product exposure including guaranteed products and re-insured fund links

- Miscellaneous Credit Risk
- Business Related Loans – the risk of loss on default on loans which are advanced to support strategic objectives as distinct from loans advanced as part of the normal business of the lending institution or as an investment
- Accruals or amounts pre-paid for services
- Indemnity Commission
- Trade Debtors
- Aggregation and diversification of Credit Risk including aggregations of exposure to a single counterparty across categories

Managing credit risk effectively is a huge challenge faced by all companies and is a critical success factor for financial institutions and energy firms which have many creditors. Banks face the risk that both, individual and institutional borrowers may default on loans. Banks must therefore underwrite and price each loan according to its credit risk and make sure that the overall portfolio of loans is well diversified. However, both financial and nonfinancial institutions also face credit risks besides the default risks associated with lending activities. For example, companies selling both goods and providing services face a risk with their receivable accounts.

Investors may see large drops in the value of debt instruments in their investment portfolios due to default or credit corrosion. Sellers and buyers of capital markets products will only get paid on any profitable transaction if their counterparties fulfil their obligations to them. The increasing mutual dependence involved in arrangements such as outsourcing and strategic alliances exposes companies to the credit condition of their business partners. Given these numerous aspects, a clear definition of credit risk is required.

Liquidity Risk

Liquidity is the ability of a company to meet expected and unexpected needs for cash. Therefore *liquidity risk* is the risk that a company will not be able to do so, and that the company will be unable to make cash payments when it needs to do so.

However, this does not mean that the company is bankrupt. Liquidity risk can also occur when a company has more assets than liabilities, and it is unable to turn the assets into cash in time. This is an important risk category for many financial institutions because they often have more non-liquid assets and more liquid liabilities.

The typical example is a *run* on a bank. For example, a simple commercial bank has some equity capital and retail deposits as liabilities and some long-term loans as assets. If several depositors lose confidence in the bank, maybe due to bad publicity, and demand their money back, the bank may not be able to liquidate its loans in time to meet their requests, and thus would fail.

Operational Risk

Operational risk is the risk that failures in internal supervision, control and computer systems, or events such as natural disasters could cause unexpected losses to the company. For example, take a firm that has entered in to a number of financial and commercial customised transactions governed by non-standard contracts instead of master agreements. If a fire breaks out at the firm and destroys all the documentation, its portfolio might become un identifiable within minutes.

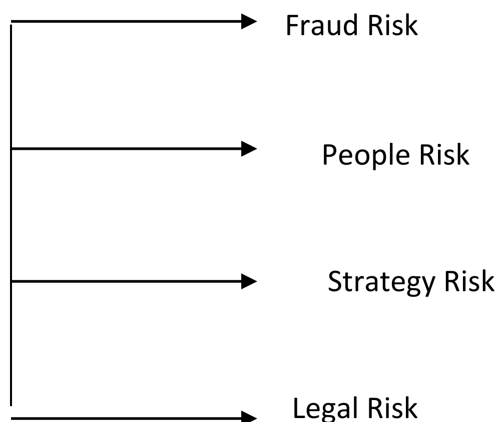
Other features of operational risks are related to internal controls and personnel quality. Fraud or negligent trading activities by personnel are operational risks. On the other hand, employing personnel who are incompetent is also an operational risk that can have consequences as significant as fraud.

Operational risk is a type of risk that has not been very well-defined. One starting point is to refer to a regulator's definition:

'The risk of direct or indirect loss caused by failed or inadequate internal processes, people, and systems or by external events… strategic and reputation risks are not included, but legal risk is.'

Operational risk loss can be categorised under the following overlapping categories:

Operational Risk



Internal and External Fraud

- Internal fraud, unauthorised activity e.g. rogue trading
- External fraud, theft and fraud; systems security e.g. "phishing"

Employee practices and workplace safety

These losses occur when required employment practices are not implemented and include losses under discrimination suits and workers' compensation; employee relations e.g. strike; constructive dismissal claims:

- Health and safety
- Discrimination and diversity

Loss of or damage to physical assets

Natural disasters, acts of God and losses due to terrorism fall under this category. Some events in this category may be insurable, such as fire damage.

Clients, Products and Business Lines

- Improper business or market practices, such as bribery or money-laundering
- Advisory activities and misselling
- Selection, sponsorship and exposure, such as failure to screen client status
- Product flaws

Losses occur due to not employing correct business practices, for example, making improper sales to clients, market manipulation or money laundering.

Business Disruption, System or Control Failures

These include all failures and losses related to software, hardware, telephony and electricity.

Execution, Delivery and Process Management

This is a broad category, including issues in data entry, collateral management, making incorrect or late regulatory or legal disclosures and damage to client assets through negligence.

- Transaction capture, execution and maintenance, errors in observing contracts and general transactions, such as supplier payments
- Monitoring and reporting e.g. incorrect account statements
- Vendors and suppliers e.g. outsourcers
- Customer and client account management; errors in claims or invoicing
- Trade counterparties, including asset managers or reinsurers

Legal Risk

Legal risk is the risk that a company will suffer a loss if a contract turns out to be unenforceable. Unexpected changes in laws and regulations can also expose firms to potential losses.

Technological Risk

Information, controls and communication are the technologies of today. The use of these technologies can lower costs, increase productivity and promote growth. Internet technology has become very important for companies such as banks, airlines, hotels and insurers. Although IT was previously a means for reducing administrative tasks so that the staff could spend more time doing their proper jobs, it now enables businesses to achieve their growth targets and business plans. In today's very competitive

business environment, using technology effectively can transform corporations and contribute towards sustainable and enhanced stakeholder value.

Changes in technology can be both an opportunity and a threat in terms of market share and market development. Introducing technology to a business can also expose the company to severe risks, which may seriously reduce profitability and competitive advantage, or at worst, lead to business failure.

Sources of risk that are included in technology risks faced by businesses are:

- Lack of investment in technology could result in the company's inability to compete.
- Insufficient technology governance, in particular, IT governance.
- Improper management of outsourcing.
- Lack of alignment of IT to business objectives.
- Insufficient protection against viruses and hacking, and the loss of confidentiality of information.
- In adequate production flexibility to be able to produce small production runs.

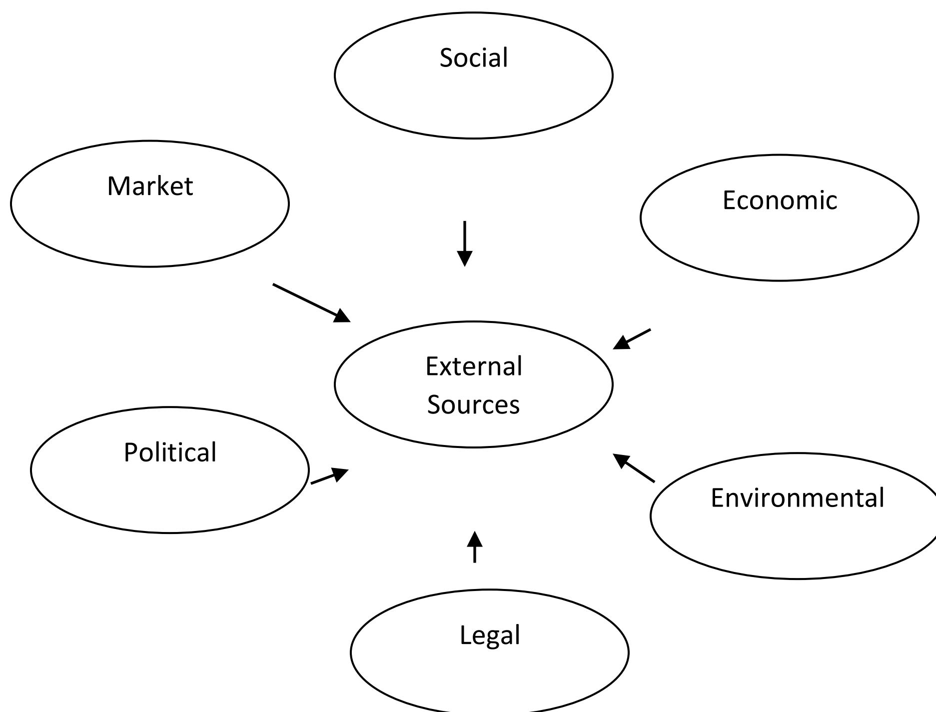
Benefits of Technology Risk Management

Technology risk management can benefit a business because it:

- Improves the quality of information for decision making purposes. Successful business leaders will take advantage of new ways of doing business based on dealing with the increasing amount of information, and creating advanced processes and products faster than their competitors.
- Encourages a proactive approach to managing technology projects and highlights the risks to investment in technology.
- Highlights the threats which exist to current business practices from new business-to-customer relationships.
- Highlights the loss of market share caused by a competitor's improved product design.
- Ensures that developments in technology within manufacturing processes are continuously reviewed because technology advances can improve productivity.

External Sources of Risk

Macro factors are different from micro factors since they are events that take place at both national and international levels. Micro factors influence individual businesses or consumers in the domestic market. It is important to understand how these external macro influences affect a business, as they indicate how a business is provided with opportunities and constraints. Macro factors include the state of the economy, the environment, the legal framework, political structure, market conditions and social factors. All these types of risks overlap and one type of risk may cause another type of risk to start.



Economic Risk

Economic risk is simply the effect of national macroeconomics on the performance of an individual business. What must be understood within national macroeconomics is that government policy can change aggregate demand and consumer spending, both of which impact companies. The issue with economic risk is that no individual business has any control over national influences on aggregate demand.

The following are included within sources of economic risk:

- Fall in demand or a shift in the aggregate demand curve.
- Exchange rates.
- Government policies, including interest rates and trade protectionism.
- Inflation.
- Movement in house prices.

Benefits of Economic Risk Management

Economic risk management provides the following benefits to a business:

- It provides knowledge about where the government is planning public spending.
- It offers an understanding of the impact of interest rates and inflation on demand.
- It provides an understanding of how the short-term behaviour of the GDP (gross domestic product) impacts employment, prices and standards of living.

- It encourages more thorough market research before entering new domestic and international markets.

Environmental Risk

When a business deals proactively with environmental issues, it not only contributes to the national programme to protect the environment, but it can also exploit business opportunities to improve business success. By introducing genuine environmental policies within its marketing activities, a business may attract customers, investors and employees. In addition, its production costs may be reduced through recycling, resource efficiencies and increased demand.

The extent of success achieved from introducing an environmental programme will depend on its appeal to customers, current or planned competitor activities, cost/benefit ratio of implementing the programme and understanding the current legislation. The legislation that governs environmental protection is very comprehensive and includes but is not limited to the following subject areas: chemicals, air, land, energy, noise and statutory nuisance, plant protection, pollution, waste, radioactive substances and water.

There are many sources of environmental risk for businesses which include, but are not limited to:

- Pollution of land, water or air as defined for instance by the Environmental Protection Act1990.
- Prosecution that arises from violation of rules set by a regulatory body.
- Increased regulation or red tape and higher operational costs.
- Severe weather conditions that cause destruction of facilities or loss of manufacturing.
- Reduced customer base caused by bad publicity as a result of pollution incidents.
- Higher energy costs due to the loss of oil production. The occurrence of hurricanes Katrina and Rita in the United States in 2005 led to a reduction in oil production, which in turn resulted in higher fuel costs across Europe. As reported in The Times London, listed food processing companies warned of higher input costs and stated that over and above the known increase in power bills are the less transparent pressures on packaging and transportation costs (Klinger 2005).

Benefits of Environmental Risk Management

Environmental risk management provides the following business benefits:

- Encourages companies to think about business continuity issues arising from possible climate change events.
- Businesses think about and plan for adverse environmental incidents.
- Creates marketing initiatives to promote products and brands in relation to the environment, sustainability, renewable energy and preserving natural resources.

- Management can focus on possible revenue generating activities rather than fighting bad publicity.
- Get less attention from regulatory bodies.
- Increased market share where customers prefer to support businesses with good environmental programmes.
- Reduces exposure to prosecution.

Legal Risk

Businesses are subject to a wide range of legal liabilities and obligations. Legal liability signifies a situation in which a person is held legally responsible for breaching a duty imposed by a law, be it either civil or criminal law. Business activities are subject to a wide range of potential liabilities. Contractual liability exists when two or more persons enter into a legally enforceable agreement with each other, tortuous liability involves the breach of an obligation imposed by the law and criminal liability arises from committing a crime as defined by criminal law. The legal system can be a source of risk exposure, such as breach of contractual obligations, and risk mitigation such as the use of patents.

There are many sources of legal risk for businesses which include, but are not limited to:

- Breaking environmental legislation laws.
- Errors in listing information in terms of misstatements, inventory errors or misleading opinions.
- Breach of copyright.
- Prosecution for breaking the law.
- Legal disagreements with overseas trading partners when differences between local and overseas laws clash.
- Loss of business and time if senior management is involved in prolonged legal battles.
- Loss of repute for companies due to prosecution or a dispute with a customer, supplier or partner.
- Lost legal disagreements due to poor record keeping.

Benefits of Legal Risk Management

Legal risk management provides the following business benefits:

- Reduced risk of reputational damage.
- Reduced time required from management and external consultants' for dealing with legal disputes.
- Offers more effective regulatory, contractual and statutory compliance.

Political Risk

Political risk is the uncertainty that results, in whole or in part, from the exercise of power by governmental actors and the actions of non-governmental groups (Zonis and Wilkin, 2001). This definition applies to both domestic and international markets, although more often it applies to overseas markets, particularly in developing countries. Political risk can also develop from national and local government inaction or direct action. Examples of inaction could be failure to issue required permits or government failing to enforce local legal provisions. Examples of direct action may include contract frustration, currency inconvertibility, tax laws, tariffs, expropriation of assets or restrictions in repatriating profits. The definition also includes sources of political risk such as politicised government policy, political instability and political violence. Political risk may also arise from increased credit risk if the government modifies policies in a manner that makes it difficult for the company to pay creditors.

The two main categories of political risk are often identified as macro political and micro political. They may also be called firm-specific and country-specific political risks, as described below:

Macro Political Risks

Macro political risks may potentially affect all companies in a country. Threats may come from extreme actions, including civil war, terrorism, a coup d'état or military takeovers. As a result of such events, governments may seize the assets of the business without compensation.

Micro Political Risks

Micro political risks affect only specific companies, industries or types of ventures. These risks may be due to new regulations or taxes imposed on particular kinds of businesses in the country.

Benefits of Political Risk Management

Political risk management provides the following benefits to a business:

- Ensures that a proactive and methodical approach is taken when evaluating alternative investment opportunities based on analysing different geographical markets set in different political contexts.
- Provides additional means to evaluate return on investment.
- Supports more rational decision-making when considering alternative choices.
- Produces tangible mitigation actions to decrease investment exposure.
- Ensures a more holistic approach to risk management.

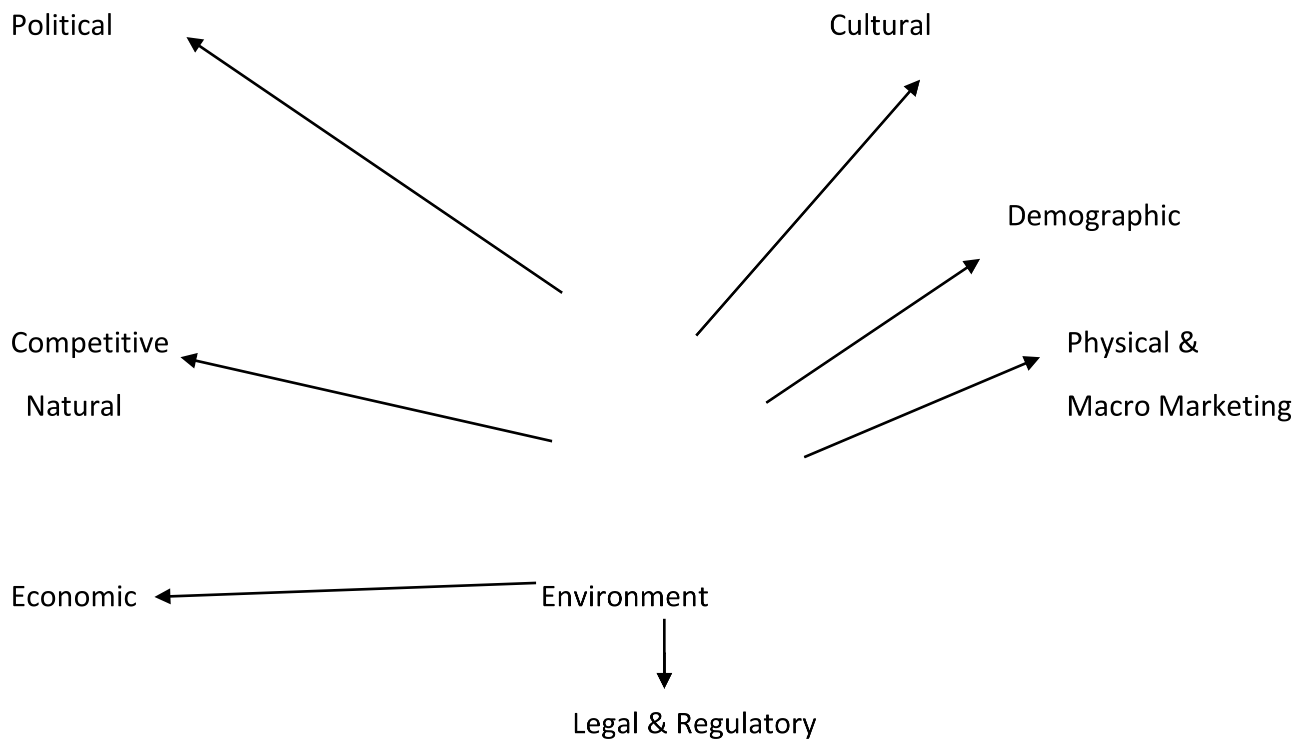
Market Risk

Market risk is the possibility of loss due to reduced sales or profit margins caused by changes in market conditions which are outside of the control of the business. All businesses are affected by market risk. The source and level of market risk varies from one industry to another and from one business to another. Market risk is multi-dimensional and is influenced by market structure, the strategic direction

taken for market growth, price elasticity, price variation and the behaviour of suppliers and buyers. Although various industries face particular types of market risks, some market risks are common to all businesses, such as loss of market shares, substitute products, an increased number of competitors and reduction in market size.

Businesses need to recognise the extent of market risk in the environment and strategies for responding to it. This requires an understanding of the environment and its various components. Every constituent has a direct impact on the success of a business. Demographic trends affect the size of the market, its location and, to an extent, the kind of goods and services required. The legal and political elements of the environment affect a business with reference to its ability to take part in foreign markets and how easy it is for foreign competitors to enter the domestic market. Patterns of economic growth and movements in interest and exchange rates are aspects in the economic environment which affect marketing.

Technological developments raise standards for competition and provide opportunities for marketing new products and services. Competition can both minimise and erode market share. Legislation introduced for environmental protection can increase the unit cost of production, yet at the same time, it also creates new opportunities. Businesses must monitor the macro environments to ensure that appropriate responses are implemented at the micro level. Environmental analysis gives businesses the ability to respond to changes and manage marketing uncertainty.



Benefits of Risk Management

Some of the benefits provided to a business by market risk management include the following:

- Improved ability to achieve business objectives.
- Supports a more methodical and systematic review of the macro and micro market environment.
- Encourages a proactive approach when seeking out opportunities due to changes in market conditions.
- Guarantees that market risks are identified, measured, monitored, managed and reported on a regular basis to senior management or the board of directors.
- Ensures the analysis of risks and opportunities associated with barriers to market entry.

Social Risk

Social risk studies those elements of society that affect business performance over which businesses have minimal control or influence. Existing and emerging trends in lifestyle social attitudes and choices are reviewed in terms of the risks and opportunities resulting from the evolving characteristics of the labour force.

The sources of social risk are as follows:

- Poorly educated new recruits, particularly with regard to language skills.
- Language barriers to international trade.
- Decreasing percentage of people of working age in the entire population.
- Inappropriate marketing strategies due to a lack of understanding of the new socio-economic groups, their income range, geographical dispersion or the percentage of the overall population that they represent.
- The value of the home improvement market and ways in which it responds to interest rates.
- Rising obesity, especially among teenagers, and its potential influence on the future workforce.
- Loss of market share due to not addressing the grey market needs.

Benefits of Social Risk Management

Social risk management helps businesses in:

- Recognising the risks to its business property and personnel due to crimes, including arson, theft, violence and vandalism.
- Identifying of the risks in employment, specifically the level of education of new recruits and the need to understand and address any shortcomings, mostly with regard to proficiency in foreign languages.
- Understanding the changing socio-economic groups and the impact this has on market sectors and product markets.

- Recognising social trends, such as the response of the public to interest rate hikes and corresponding decreases in consumer spending and retail sales, such as in the home improvement market.

Further Reading:

- ✓ ***John Fraser, Betty Simkins, (2010), Enterprise Risk Management***
- ✓ ***Kit Sadgrove, (2005), The Complete Guide to Business Risk Management***